

b) Verizon VA's Switching EF&I Factor

AT&T/WorldCom also criticize the 40.2% EF&I factor Verizon VA used in its switching cost studies,^{55/} but here, too, their arguments are meritless. Despite their general argument, discussed above, that Verizon VA's 1998 data is outdated, AT&T/WorldCom in this instance insist that data from a far *earlier* date should be used — because they have managed to achieve significantly lower switching rates by manipulating the data through this particular inconsistency. AT&T/WorldCom's approach also simply ignores the manner in which EF&I factors are calculated.

AT&T/WorldCom propose a 27% switching EF&I factor, or approximately 60% of the factor employed by Verizon VA. (AT&T/WCom Ex. 12 at 121.) They do not suggest any basis to believe that this factor is realistic or could actually be achieved; in fact, both AT&T and WorldCom refused to provide their own EF&I data for switching to use as a basis for comparison when asked to do so by Verizon VA.^{56/}

Instead, to develop their proposed factor, AT&T/WorldCom combined an 11% EF&I factor from a 1992 Verizon filing, which accounts for the local telephone company portion of the factor, with a 12% factor (plus sales tax) that they calculated from the SCIS model, which accounts for the vendor portion of the factor. This exercise makes no sense. The 1992 EF&I factor is based on EF&I costs and switching material investments that are nearly ten years old. To assume the relevance and utility of a 1992 factor in computing a current or future EF&I ratio

^{55/} Contrary to AT&T and WorldCom's claims, Verizon VA has provided complete documentation of the data supporting its proposed EF&I factor. (VZ-VA Ex. 122 at 207.)

^{56/} In response to VZ-VA data requests 1-3 and 7-23, in which Verizon VA specifically requested EF&I costs for AT&T/WorldCom's most recent switch purchases, AT&T provided only the total amount paid for its recent switch purchases, but not a specific amount for EF&I. WorldCom refused to provide any information.

— let alone its superiority to the 1998 data Verizon used — one would have to overlook two key facts. First, given the fast-paced development of switching technology discussed in Part III above, the switching equipment used today is undoubtedly different from that used in 1992. Second, there thus is no way to know whether the techniques and costs for installing that older equipment bear any similarity to the costs of installing current equipment. Even aside from this problem, the 1992 factor could not simply be applied to current investment levels without adjustment. As explained above, when the investment level used in calculating an EF&I factor is altered, the ratio of EF&I costs to investments must be recalculated as well. The fact that EF&I costs were 10% of investment costs in 1992 would not mean that a 110% adjustment would be appropriate for today's lower investment costs. At minimum, even assuming the relevance of the actual 1992 EF&I *dollars*, the 1992 *factor* itself would have to be recalculated to avoid producing significantly understated EF&I costs. (See VZ-VA Ex. 122 at 203-05.)

AT&T/WorldCom also seek to defend their proposed EF&I factor by referring to a 1992 Open Network Architecture filing with this Commission, in which telephone companies averaged a 10% EF&I factor. (AT&T/WCom Ex. 12 at 120 n. 110.) This simply reiterates the mistakes discussed above: that factor is unrelated to the switching investment assumption that should be used today and is based on different and outdated EF&I techniques and costs. Petitioner's reliance on an 8% proposed EF&I factor in a 1999 Commission Universal Service Fund proceeding is equally misplaced. Most significantly, as Verizon VA explained, that 8% factor reflects the lower switch equipment cost discounts (and thus higher costs used in the EF&I denominator) that small rural telephone companies, in contrast to Verizon, likely command. In any event, that factor includes *only* engineering costs, not the costs of furnishing and installation, which *are* appropriately included in Verizon VA's EF&I factor. (VZ-VA Ex. 122 at 206.)

D. Annual Cost Factors

After converting the material costs of facilities into the installed costs of the facilities, Verizon VA applied annual cost factors (ACFs) to the investment to determine the costs associated with providing that facility as part of the UNE.^{57/} The ACF process is an ideal means of identifying the general level of expenses typically associated with a class of equipment or plant and of spreading common costs proportionately. The ACFs, which are calculated based on Verizon's 1999 expense data, are designed to estimate the expense relationships that are and will be associated with each particular class of investment used in the forward-looking network. (VZ-VA Ex. 107 at 48-55.)

Petitioners charge that the expenses that Verizon VA identified are embedded, or are not sufficiently adjusted so as to be forward-looking. In addition, AT&T/WorldCom take issue with certain elements of the ACF calculation process. In both cases, however, AT&T/WorldCom's criticisms are misguided and without logical underpinning.

1. Verizon VA's Expense Factors Are Forward-Looking.

Verizon VA's ACFs are fundamentally forward-looking. Within its cost studies, Verizon VA adjusted all ACFs to reflect increased productivity that is expected in coming years, as well as expected levels of inflation. In addition, the use of plant-account-specific ACFs ensures that Verizon VA's studies reflect the lower repair and maintenance expense that generally would be associated with the use of newer technology assets in the forward-looking network: as explained further below, for example, where the forward-looking network assumes more use of fiber than copper, the ACFs will be more heavily weighted toward the lower network costs associated with

^{57/} This issue is covered in VZ-VA Ex. 107 at 48-76 and VZ-VA Ex. 122 at 15-51.

fiber, and thus the overall forward-looking network expenses will be lower. (*See, e.g.*, VZ-VA Ex. 122 at 22-26.)

AT&T/WorldCom nonetheless repeatedly insist that Verizon VA used embedded expenses in its studies. Their attack takes three forms. First, although they initially suggest that Verizon VA did not make productivity adjustments at all (AT&T/WCom Ex. 12 at 81), later, apparently conceding error, they suggest instead that the productivity gains used by Verizon VA are somehow specific to the embedded network, not those “one might expect from putting into place the forward-looking network.” (Tr. at 3795.) Second, AT&T/WorldCom simply ignore the ACF methodology used by Verizon VA and contend that Verizon VA’s studies do not account for the lower expenses associated with newer facilities. Third, AT&T/WorldCom argue that application of Verizon VA’s forward-looking-to-current conversion factor (FLC) is designed to and does produce embedded rather than forward-looking expenses. Petitioners are wrong on all three points.

a) Verizon VA’s Productivity Adjustments Are Forward-Looking.

At the hearing, AT&T/WorldCom repeatedly suggested that Verizon VA’s productivity factors were developed based on the embedded network, not the forward-looking network. (*See, e.g.*, Tr. at 3795.) But, as Mr. Minion explained, the distinction AT&T/WorldCom seek to make between productivity assumed for the actual network, and productivity assumed for the forward-looking network, is entirely artificial. There is no question, as Mr. Minion agreed, that the productivity gains used by Verizon VA are those that are “actual[ly] achievable . . . for the network that truly will be in place in the future over the planning period.” (Tr. at 3795.) He

explained, however, that the advanced technology and plant assumed for the forward-looking network would not affect or increase those productivity figures. (Tr. at 3796.)

First, as Mr. Minion explained, the equipment and plant in the current network generally is fairly new, and thus there is no reason to assume in most cases that equipment in the forward-looking network would produce significant productivity gains that would not already have been realized by Verizon VA. (Tr. at 3796-97.) Thus, as Mr. Minion testified, Verizon VA does not believe that “all brand new DLC [or other equipment] would necessarily have a[] . . . productivity improvement beyond what we reasonably expect to see based upon our existing network.” (Tr. at 3796.)

Second, the productivity figures used by Verizon VA are designed specifically to capture the reductions in labor time that should become possible as a result of better or more mechanization of certain processes over time and, as explained below, mergers and other efforts to increase company productivity. (VZ-VA Ex. 122 at 23-24.) In other words, the advances in the network that Petitioners argue should increase productivity are precisely the type of advances that drive the productivity factors Verizon VA used in its studies. Additional productivity adjustments above and beyond those assumed by Verizon VA would not make sense and would exceed anything remotely achievable.^{58/} And of course, AT&T/WorldCom have not proposed any specific advance or technique that they believe would increase productivity further than what is assumed by Verizon VA; certainly nothing contained in their MSM provides an example of

^{58/} Petitioners have pointed out that generally Verizon VA’s productivity adjustment is outpaced by inflation. This simply reflects the level of inflation growth in the telecommunications industry and in particular in Verizon VA’s region. (Tr. at 3803.)

more efficient technology that could reduce labor needs beyond the level anticipated by Verizon VA.^{59/}

b) The Application of ACFs Reflects the Lower Costs of the Forward-Looking Network.

As noted above, AT&T/WorldCom suggest that Verizon VA failed to account in its studies for the fact that in a TELRIC network, repair, maintenance, and other such expenses may be lower as a result of using newer or different plant assets. But their argument demonstrates at best a basic misunderstanding of the ACF methodology. Any efficiencies that are likely to be experienced in the forward-looking network^{60/} are in fact reflected, as Mr. Minion has explained, “in the application of the network ACFs associated with the relevant class of plant.” (VZ-VA Ex. 122 at 26.) As Mr. Minion testified:

Within the unbundled network element studies, to the extent that they reflect a greater amount of fiber and newer equipment, they will reflect the fact that you have less network expenses associated with that unbundled network element than you had in the past.

(Tr. at 3800.) Thus, as noted above, because the forward-looking network assumes more fiber and electronics than copper, the total network expenses associated with the loop, for example,

^{59/} Although Petitioners suggest that Verizon VA failed to account for productivity adjustments in common overhead costs, Mr. Minion demonstrated that this is simply false: the productivity adjustment applies, by virtue of basic mathematical properties, to the common overhead factor as well as to the underlying ACFs to which the common overhead factor is applied. (See Tr. at 3806-07.)

^{60/} The mere fact that the network might be more “forward-looking” or sophisticated would not *necessarily* reduce expenses or increase productivity. To the contrary, as the automobile has advanced and become more sophisticated, Americans have spent *more* time and money on maintenance for their vehicles, not less. (See VZ-VA Ex. 122 at 24-25.) In the telephone network, as well, switch maintenance and repair expenses have risen, not fallen, as digital switch technology has developed. (*Id.* at 25.) Thus, use of the standard, optimistic productivity factors may even understate forward-looking costs.

will reflect the lower repair and maintenance expenses associated with fiber and electronics.^{61/}
(Tr. at 3800-01.)

c) The Forward-Looking Conversion Factor Ensures that Application of Verizon VA's Annual Cost Factors Identifies the Previously Calculated Forward-Looking Expense, Not Embedded Expenses.

AT&T/WorldCom strive to show that the application of the FLC factor within Verizon VA's studies produces embedded expenses. But, as Judge Linsider concluded in his Recommended Decision in the New York UNE Proceeding, rejecting precisely the disingenuous arguments that Petitioners raise here, "[t]he FLC does not convert TELRIC costs to embedded; it merely tries to restore a 'twice-TELRICed' cost to one that recognizes TELRIC only once."^{62/}

As demonstrated in detail above, the expenses used in Verizon VA's studies are *forward-looking*. Adjustments to reflect productivity and inflation have been made; the copper repair expenses have been adjusted downward; and through use of plant-specific ACFs, the lower costs associated with the plant that should be used in the forward-looking network are reflected in the

^{61/} In one case an adjustment was made in the development of the factor itself to reflect the fact that within the specific plant account, expenses are expected to decrease below the level experienced in the current network. Specifically, Verizon VA concluded that the repair costs associated with copper cable in the current network are probably higher than those that likely would be experienced in the forward-looking network in which newer copper cable would be used. (Tr. at 3808.) Based on the experience of Verizon engineers and their conservative assumptions concerning "use of the latest material, design standards, and application guidelines," Verizon VA reduced copper cable repair expenses by 5%. (VZ-VA Ex. 122 at 35 n.29; Tr. at 3808.) This adjustment was not necessary with respect to any other expenses, because as Mr. Minion explained, in most cases the plant in the current network is of fairly recent vintage and thus forward-looking repair expenses should be similar to current expenses; copper cable, in contrast, was placed "30 or 40 years ago." (Tr. at 3797.)

^{62/} *Recommended Decision on Module Three Issues*, New York Case 98-C-1357 at 44 (New York State Public Service Commission, May 16, 2001) ("*Recommended Decision*").

studies. As Judge Linsider made clear: “[T]he numerator of Verizon’s proposed ACF is *forward-looking TELRIC* expense.”^{63/} The need for the FLC arises because the *denominator* of the ACFs is Verizon VA’s embedded investment. In other words, the resulting ACFs state the relationship between forward-looking expenses and embedded investment. When the presumably lower TELRIC investment level is identified at the end of these proceedings, it would not make sense to simply apply the ACF ratios to that new investment: the resulting expense figures would be far lower than the forward-looking expense figures previously calculated by Verizon VA. There is no substantive reason that the expenses would be reduced *beyond* the amount identified by Verizon VA after application of forward-looking adjustments. These new, lower figures would simply be the result of the application of a mathematically-driven “double TELRIC-ing.” (VZ-VA Ex. 122 at 18-19.) As Judge Linsider noted, when the ACF “ratio . . . is applied to forward-looking TELRIC investment, [the result is] double counting the TELRIC adjustment, as Verizon argues.”^{64/}

For example, assume that the current maintenance expenses associated with a \$1000 piece of equipment are \$150, and that after forward-looking adjustments, Verizon VA assumes that the TELRIC expense would be \$100. The resulting ACF would be .10. If the TELRIC cost for that equipment is reduced, however, to \$900, application of the .10 ACF would produce only \$90 in maintenance expenses, which is \$10 less than the forward-looking total expenses of \$100. The mere fact that the equipment now costs less does not mean it will cost less to maintain the equipment; it is more likely that no change in maintenance costs will have occurred at all. As Dr. Tardiff explained:

^{63/} *Id.*

^{64/} *Id.*

Let's take a particular example. Let's say this represents the fact you just bought a digital switch from 1999 and you observed for a year how much it cost to maintain that expense. Let's say that ratio is 10%. Two years later, three years later, that switch is assuming the same forward-looking technology, so the technology hasn't changed, but let's say the prices come down to by 30%, okay? But there is no reason to believe, if it's the same switch [for] a lower price[,] you would be able to maintain it for 30% less.

(Tr. at 3778.) The FLC, which is designed to estimate the relationship between the TELRIC investment and embedded investment, is intended to remedy this, by adjusting the denominator of the ACF and thus returning the expense dollars in this example back up to the forward-looking level of \$100. (*See, e.g.*, VZ-VA Ex. 107 at 73; VZ-VA Ex. 122 at 17-29.)

In other words, the FLC is not used to *identify* expenses, as AT&T/WorldCom repeatedly insist, because the forward-looking expenses already *have* been identified:

MR. GOLDMAN: Verizon estimates forward-looking expenses by what—by applying what you call a forward-looking conversion, or FLC factor, to the expense ratio; correct?

MR. MINION: That's incorrect.

MR. GOLDMAN: Verizon doesn't use a FLC factor in calculating the TELRIC expenses?

MR. MINION: [No.] The forward-looking expenses are identified first where we make adjustments to [the embedded] expenses. The factors have adjustments made for productivity, for inflation, for avoidance of expenses associated with copper cable repair dollars. We make adjustments for retail avoided costs. Those are what we have as our forward-looking TELRIC expenses that we identify which serve as the starting point for development of factors to be used within the studies. . . .

The FLC factor is an adjustment mechanism. It is only used to identify the fact that the development of the annual cost factors are on the basis of the embedded investments, but within the UNE cost studies you're applying it to the TELRIC investments. That's simply all it is doing.

(Tr. at 3774-75.) Accordingly, the FLC does *not* increase expenses at all; it simply corrects for the mathematical quirk inherent in the way Verizon VA calculates its ACFs and ensures that application of those ACFs produces the already-identified forward-looking expenses.

A theoretically simpler way to produce the same result would be to calculate the ACFs by comparing forward-looking expenses to forward-looking investment. (VZ-VA Ex. 122 at 19-20.) However, given the way in which Verizon VA's cost studies are performed, this would significantly delay the factor development process until all the investment studies were completed, and would further delay calculation of the final costs. Moreover, if the TELRIC investment levels adopted by the Commission ultimately were different from those assumed by Verizon VA, the ACF calculations would have to be performed yet again — or something akin to a FLC would have to be adopted to relate the TELRIC investment denominator used by Verizon VA to the TELRIC level ultimately adopted by the Commission. (Tr. at 3883-84.) The FLC thus would not be obviated, but just different. In any event, as FCC staff recognized at the hearing, once the Commission “make[s] some determinations on inputs . . . Verizon might be filing a different proposed [FLC] number[.]” (Tr. at 3885.) In the interim, Verizon VA has used a 80% FLC based on data reviewed by the New York PSC Staff in connection with the *Recommended Decision*, although that data would support even a 75% FLC. (Tr. at 3882-84.) As Mr. Minion testified, the initial data that Verizon has been able to develop to compare the TELRIC investment levels from Verizon VA's studies to its embedded investment levels indicate that the 80% FLC ratio is accurate. (Tr. at 3885-86.) As the staff recognized, the FLC — and hence in a sense, the ACFs — can be easily recalculated at the end of the proceeding to produce the correct expense amounts to include in the cost studies.^{65/}

^{65/} Petitioners' suggestion that Verizon VA should have applied a current cost to book cost (CC/BC) ratio in place of the FLC simply misses the boat. (AT&T/WCom Ex. 12 at 85-86.) The CC/BC, which simply brings embedded investment up to current dollars (e.g., what it would cost to purchase a 1997 switch in 1999 dollars), does not obviate the need for the FLC; it simply changes the FLC ratio. An adjustment akin to the FLC would still be needed to adjust for the fact that the CC/BC-adjusted investment denominator likely still would be higher than the

2. The Specific Expenses Used in Verizon VA's ACF Calculations Are Accurate, Reasonable, and Forward-Looking.

Out of the myriad expense categories and items on which Verizon VA relied, AT&T/WorldCom select a small handful of expenses to attack. For example, Petitioners never question as a general matter Verizon VA's use of 1999 expense data to calculate ACFs. Verizon VA used 1999 data because it was the most recent data available, and because initial analyses demonstrate that expenses in 2000 either remained relatively flat or increased. (*See* Tr. at 3871-73.) Petitioners thus are limited to arguing that certain 1999 expenses should be eliminated or reduced. As we show below, their arguments are without merit.

a) There is No Basis to Reduce Verizon VA's Expenses Further to Account for Unspecified "Merger Savings."

AT&T/WorldCom argue that Verizon VA's expenses should be reduced by some unspecified amount to reflect savings that Verizon VA allegedly will enjoy as a result of the NYNEX and GTE mergers, but which, AT&T/WorldCom contend, it has not reflected in its studies. (AT&T/WCom Ex. 12 at 87-88.) This argument is based on nothing but speculation and is belied by the facts.

First, to the extent the NYNEX merger produced expense savings related to the provision of UNEs, these would have been included in the 1999 base year expenses. Second, anticipated expense reductions for the future would be reflected in the productivity adjustments Verizon VA

TELRIC investment levels. (*See* VZ-VA Ex. 122 at 29-34.) As Dr. Tardiff explained, "if it's a current investment, that is—what would you pay in 1999 to buy digital switches, then my [FLC] example still holds." (Tr. at 3780.) Although the FLC eliminates any need for a CC/BC adjustment, applying just a CC/BC ratio produces vastly understated expenses. (VZ-VA Ex. 122 at 31-32 and n. 26.)

savings also are affected by the outcome of regulatory and judicial decisions, including those in proceedings such as these.^{67/}

Recognizing that there is no way of specifically — or even roughly — identifying an amount of savings that Verizon VA actually has experienced or will experience in connection with its mergers, Petitioners argue that the common overhead factor should be reduced by 2.6% to mirror an approach taken in the New York UNE proceeding to estimate anticipated future merger savings in New York. (AT&T/WCom Ex. 12 at 88.) There is no logic in making an adjustment based on a rough prediction made in the past — for savings experienced by an operating company in a different state — without any evidence that such hypothesized savings will reduce costs beyond what Verizon VA's studies already reflect.^{68/} Using Verizon VA's actual 1999 expenses as a starting point, and adjusting based on expected productivity, is a far more reliable means of estimating merger savings than relying on purely hypothetical and uncertain assumptions about specific merger savings amounts.

^{67/} Whether or not the mergers produce productivity savings in the long run, in the short run, they have caused Verizon to incur significant transition costs. As Verizon recently reported to the Securities & Exchange Commission in its Form 10-Q, Verizon expects to incur roughly \$2 billion of transition costs in connection with the integration of systems, consolidation of real estate, and employee relocation necessitated by the GTE merger as well as two other corporate initiatives; \$1.4 billion of this was incurred through the third quarter of 2001. "Verizon Reiterates Sees \$2 Billion in Transition Costs," Dow Jones Corporate Filings Alert (Nov. 15, 2001).

^{68/} In addition, as Mr. Minion explained, the New York proceeding was based on 1998 expenses, not 1999 expenses, and thus the more recent expenses used in these proceedings already reflect whatever relevant merger savings have been experienced as a result of the NYNEX merger. (VZ-VA Ex. 122 at 48; Tr. at 3837.)